REMARKS

The Official Action dated April 9, 2003 has been carefully considered. Accordingly, the changes presented herewith, taken with the following remarks, are believed sufficient to place the present application in condition for allowance. Reconsideration is respectfully requested.

By the present Amendment, the specification has been amended to include the continuing data. Claims 1, 4-14 and 19 remain in the application. Claims 15-18 and 20-62 have been cancelled in view of the Examiner's restriction requirement. Applicants retain the right to present claims 15-18 and 20-62 in a divisional application. Claim 1 has been amended to clarify the method for inhibiting lipid oxidation associated with a condition in a patient. Claims 4 and 11-12 have been amended as to matters of form and to clarify the limitations recited therein. Claim 19 has been amended as to a matter of form. It is believed that these changes do not involve any introduction of new matter, whereby entry is believed to be in order and is respectfully requested.

The specification was objected as the continuing data was missing from page 1, line 1. Accordingly, the specification has been amended to include the continuing data. Applicants submit that the objection to the specification has been overcome. Reconsideration is respectfully requested.

Claims 1, 4-14 and 19 were rejected under 35 U.S.C. §112, first paragraph, as not being enabled by the specification. Specifically, the Examiner asserted that while the specification is enabling for a method for treating conditions associated with lipid oxidation

comprising administering apolipoprotein A-IV compound, the specification does not reasonably provide enablement for a method for treating conditions associated with lipid oxidation comprising administering all apolipoprotein A-IV variants.

This rejection is traversed with respect to present claims 1, 4-14 and 19 and reconsideration is respectfully requested. More particularly, claim 1 recites a method for inhibiting lipid oxidation associated with a condition in a patient. The method comprises administering to a patient a composition comprising a pharmacologically effective amount of an apolipoprotein (apo) A-IV compound to inhibit lipid oxidation. The apolipoprotein A-IV compound is a peptide sequence of from 6 to 71 amino acids in length and has substantially the same lipid oxidation properties as the apolipoprotein A-IV compound.

Variants of apolipoprotein A-IV, which include derivatives, analogs, homologues and fragments, are fully enabled by the specification. As noted by the Examiner, the specification outlines art-recognized procedures for producing variants of Apolipoprotein A-1V. Specifically, homologue is defined in the specification at page 6, lines 14-16 as "corresponding peptides derived from other known apo A-IV proteins and having the same or substantially the same lipid oxidation inhibition properties"; analog is defined in the specification at page 6, lines 16-19 as "substitutions in the amino acid sequences of the peptides, providing the lipid oxidation inhibition properties are retained"; derivative is defined in the specification at page 22, line 23--page 23, line 2 as "any peptide derived from a peptide of the present invention and in which one or more amino acids have been chemically derivatized by reaction of one or more functional side groups of the amino acid residues present in the peptide"; and fragment is defined in the specification at page 23, lines 16-18 as "any subject peptide having an amino acid sequence shorter than that of any peptide depicted in SEQ ID NO:1-13 and which a fragment retains the appetite suppressant or feeding

inhibition properties as the subject peptides". In each of these definitions, the variant of apolipoprotein A-IV has the same or substantially the same lipid oxidation properties as apolipoprotein A-IV. To further emphasize that the claims are fully enabled by the specification, claims 1 and 4 have been amended to recite that the variants have "substantially the same lipid oxidation properties" as the apolipoprotein A-IV compound.

A disclosure is enabling if, from the information set forth in the specification, coupled with information known in the art, one of ordinary skill in the art can make and use the invention without undue experimentation, *United States v. Teletronics, Inc.*, 8 USPQ2d 1217, 1224 (Fed. Cir. 1988). Moreover, every aspect of a generic claim certainly need not have been carried out by an inventor, or exemplified in the specification; rather, reasonable detail must be provided in order to enable members of the public to understand and carry out the invention, *Genetec v. Novo Nordisc, A/S*, 42 USPQ2d 1001, 1005 (Fed. Cir. 1997). Finally, a patent need not teach, and preferably omits, what is well known in the art, *Hybritech, Inc. v. Monoclonal Antibodies, Inc.*, 231 USPQ 81, 94 (Fed. Cir. 1986). As the specification clearly defines derivatives, analogs, homologues and fragments, one skilled in the art will appreciate how to produce variants of Apolipoprotein A-IV which have substantially the same lipid oxidation as the Apolipoprotein A-1V compounds for use in accordance with the present invention.

It is therefore submitted that present claims 1, 4-14 and 19 are fully enabled by the specification, whereby the rejection under 35 U.S.C. §112, first paragraph, has been overcome. Reconsideration is respectfully requested.

Claims 1-4, 7 and 11-14 were rejected under 35 U.S.C §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter

which Applicants regard as the invention. This rejection is traversed and reconsideration is respectfully requested.

Initially, Applicants note that claims 2-3 were cancelled in the Preliminary Amendment filed by Express Mail on August 24, 2000, and therefore are not under consideration.

With respect to claim 1, the Examiner asserted that the claim is indefinite as to what the effective amount of apolipoprotein A-IV is supposed to have done in the treatment of the condition associated with lipid oxidation. Applicants traverse the Examiner's position. However, to expedite prosecution of the application, claim 1 has been amended to clarify the limitations therein. Specifically, claim 1 has been amended to recite a method "for inhibiting lipid oxidation associated with a condition in a patient". Accordingly, Applicants submit that claim 1 is definite.

With respect to claim 4, the Examiner asserted that the claim is indefinite because it is unclear what are the derivatives, analogs, homologues, fragments and mixtures of apolipoprotein A-IV compounds and it is unclear whether these variants have the same properties of the full length protein. In addition, the Examiner asserted that the claim is indefinite for the use of the phrase "selected from the group comprising" as a Markush group is supposed to be closed not opened. Finally, the Examiner asserted that it is unclear as to what components and amounts the "mixture" is reciting.

Applicants traverse the Examiner's position. However, to expedite prosecution of the application, claim 4 has been amended to delete the phrase "selected from the group"; to substitute the word "thereof" with "of said amino acid sequences"; and to recite that the variants have "substantially the same lipid oxidation proprieties as the peptide". In addition, Applicants note that variants of apolipoprotein A-IV, which include derivatives, analogs,

homologues and fragments, are fully defined by the specification. Specifically, as set forth in detail above, all variants of apolipoprotein A-IV, as defined by the present invention, have the same or substantially the same lipid oxidation properties as Apolipoprotein A-IV. Specifically, homologue is defined in the specification at page 16, lines 14-16; analog is defined in the specification at page 6, lines 16-19; derivative is defined in the specification at page 22, line 23 -- page 23, line 2 and fragment is defined in the specification at page 23, lines 16-18. Therefore, the properties of the variants are definite. Finally, as claim 4 is dependent on claim 1, the mixtures of said amino acid sequences must be "a pharmacologically effective amount of an apolipoprotein (apo) I-IV compound". Accordingly, the amounts of the mixture are clearly recited. Therefore, Applicants submit that claim 4 is definite.

With respect to claim 7, the Examiner asserted that the use of the phrase "mixture thereof" is indefinite. Applicants traverse the Examiner's position. Specifically, Applicants submit that "mixture thereof" is definite as one skilled in the art would appreciate that this phase means that the lipophilic compound may be a mixture from the group consisting of organic solvents, phosphatidyl choline, or cholesterol. Accordingly, Applicants submit that claim 7 is definite.

With respect to claim 11, the Examiner asserted that the claim is indefinite because of the use of the phrase "from about 1 to about 1000 mg." Specifically, the Examiner asserted that it is unclear what is the lower and upper limit of the peptide in the composition and what further it is unclear what is the range. Applicants traverse the Examiner's position. Applicants submit that the range is definite as it provides the unitary dose for administering the composition to a patient. Moreover, Applicants submit that the term "about" is definite as there is no rule that use of the term "about" is prohibited and to the contrary, the Court of

Appeals for the Federal Circuit has specifically indicated that use of the term "about" is acceptable in appropriate fact situations, *Amgen, Inc. v. Chugai Pharmaceutical Co., Ltd.*, 18 USPQ 1016, 1031 (Fed. Cir. 1991); *W.L. Gore & Assoc., Inc. v. Garlock, Inc.*, 220 USPQ 303, 316. Accordingly, Applicants submit that claim 11 is definite.

With respect to claim 12, the Examiner asserted that the claim is indefinite because of the use of the phrase "from about 1 to about 3 times a day." Specifically, the Examiner asserted that it is unclear what is the lower and upper limit of the dose of the composition administered per day. Applicants traverse the Examiner's position. However, to expedite prosecution of the application, claim 12 has been amended to clarify the range and to clarify that the composition is administered "to a patient". Therefore, Applicants submit that claim 12 is definite.

It is therefore submitted that present claims 1, 4, 7 and 11-14 are definite and the rejection under 35 U.S.C. §112, second paragraph, has been overcome. Reconsideration is respectfully requested.

Claims 1, 4-14 and 19 were rejected under 35 U.S.C. §102 (a) as being anticipated by Qin et al, The American Physiological Society, vol. 274, pp H1836-H1840. Specifically, the Examiner asserted that Qin et al teach the role of ApoA I-IV as an endogenous inhibitor in protection against lipid oxidation.

This rejection is traversed and reconsideration is respectfully requested. More particularly, Applicants submit that the publication date of the cited reference, as set forth in the enclosed PubMed citation is May 1998 and not March 9, 1998, as recited by the Examiner. Thus, as the present application claims priority to Application Serial No. 60/080,131 filed March 31, 1998, which fully discloses the presently claimed invention, the

cited reference is not proper prior art to the present application under 35 U.S.C. §102 and therefore cannot anticipate the present claims.

It is therefore submitted that claims 1, 4-14 and 19 are not anticipated by Qin et al under 35 U.S.C. §102(a). Reconsideration is respectfully requested.

Claims 1, 4-12 and 19 were rejected under 35 U.S.C. §102(b) as being anticipated by Boguski et al, Proc. Natl. Acad. Sci., vol. 81, pp 5021-5025, August 1984. The Examiner asserted that Boguski et al teach an apolipoprotein A-IV from rat that contains 13 tandem repetitions of a 22-amino acid segment with amphipathic helical potential and may thus constitute lipid-binding domains. Moreover, the Examiner asserted that Boguski et al teach a peptide having 100% sequence identity to SEQ ID NO: 5, which fragment is considered for the fragment of apolipoprotein A-IV of claims 1, 4 and 19.

This rejection is traversed and reconsideration is respectfully requested. More particularly, claim 1 recites a method for inhibiting lipid oxidation associated with a condition in a patient. The method comprises administering to a patient a composition comprising a pharmacologically effective amount of an apolipoprotein (apo) A-IV compound to inhibit lipid oxidation. The apolipoprotein A-IV compound is a peptide sequence of from 6 to 71 amino acids in length and has substantially the same lipid oxidation properties as the apolipoprotein A-IV compound. Applicants find no teaching or suggestion in Boguski et al of a method of inhibiting lipid oxidation as defined by the present claims. Specifically, Boguski et al merely disclose an isolated apolipoprotein A-IV compound, but do not teach or suggest a method of inhibiting lipid oxidation associated with a condition in a patient.

Anticipation under 35 U.S.C. §102 requires the disclosure in a single prior art reference each element of the claims under consideration, *Alco Standard Corp v. TVA*, 1 USPQ2d 1337, 1341 (Fed. Cir. 1986). In view of the failure of Boguski et al to disclose a

method for inhibiting lipid oxidation associated with a condition in a patient as defined by the claims, the reference does not disclose each element of the claims under consideration, and therefore does not support a rejection of the claims under 35 U.S.C. §102. It is therefore submitted that the rejection under 35 U.S.C. §102 has been overcome.

It is believed that the above represents a complete response to the Examiner's rejections of the claims under 35 U.S.C. §§102 and 112, first and second paragraphs, and places the present application in condition for allowance. Reconsideration and an early allowance are requested.

Respectfully submitted,

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